

What is claimed is:

1. A method for treating a subject afflicted with atrial tachyarrhythmia comprising administering to the subject a therapeutically effective amount of an agent which inhibits protein kinase A (PKA) phosphorylation of a type 2 ryanodine receptor (RyR2) in the subject's heart, thereby treating the subject.
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- 10 2. The method of claim 1, wherein PKA phosphorylation of the RyR2 receptor causes dissociation of a FKBP12.6 binding protein from the RyR2 receptor.
- 15 3. The method of claim 1, wherein the atrial tachyarrhythmia is an atrial fibrillation or a supraventricular tachyarrhythmia.
- 20 4. A method for treating a subject afflicted with atrial tachyarrhythmia comprising administering to the subject a therapeutically effective amount of an agent which inhibits dissociation of a FKBP12.6 binding protein from a type 2 ryanodine (RyR2) receptor in the subject's heart, thereby treating the subject.
- 25 5. The method of claim 4, wherein the atrial tachyarrhythmia is an atrial fibrillation or a supraventricular tachyarrhythmia.
- 30 6. The method of claim 4, wherein the agent is JTV-519.
7. A method for treating a subject afflicted with atrial tachyarrhythmia comprising administering to the subject a therapeutically effective amount of an agent which mimics binding of a FKBP12.6 binding protein to a type

2 ryanodine receptor (RyR2) of the subject's heart, thereby treating the subject.

8. The method of claim 7, wherein the atrial tachyarrhythmia is an atrial fibrillation or a supraventricular tachyarrhythmia.
9. An article of manufacture comprising (i) a packaging material having therein an agent which inhibits protein kinase A (PKA) phosphorylation of a type 2 ryanodine receptor (RyR2) and (ii) a label indicating a use for the agent in treating a subject afflicted with atrial tachyarrhythmia.
- 15 10. An article of manufacture comprising (i) a packaging material having therein an agent which inhibits dissociation of a FKBP12.6 binding protein from a type 2 ryanodine receptor (RyR2) and (ii) a label indicating a use for the agent in treating a subject afflicted with atrial tachyarrhythmia.
11. The article of manufacture of claim 10, wherein the agent is JTV-519.
- 25 12. An article of manufacture comprising (i) a packaging material having therein an agent which mimics binding of a FKBP12.6 binding protein to a type 2 ryanodine receptor (RyR2) and (ii) a label indicating a use for the agent in treating a subject afflicted with atrial tachyarrhythmia.
- 30 13. A method for inhibiting the onset of atrial tachyarrhythmia in a subject comprising administering to the subject a prophylactically effective amount of

an agent which inhibits protein kinase A (PKA) phosphorylation of a type 2 ryanodine receptor (RyR2) in the subject's heart, thereby inhibiting the onset of an atrial tachyarrhythmia in the subject.

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14. The method of claim 13, wherein PKA phosphorylation of the RyR2 receptor causes dissociation of a FKBP12.6 binding protein from the RyR2 receptor.

10 15. The method of claim 13, wherein the atrial tachyarrhythmia is an atrial fibrillation or a supraventricular tachyarrhythmia.

16. A method for inhibiting the onset of atrial tachyarrhythmia in a subject comprising administering to the subject a prophylactically effective amount of an agent which inhibits dissociation of a FKBP12.6 binding protein from a type 2 ryanodine (RyR2) receptor in the subject's heart, thereby inhibiting the onset of atrial tachyarrhythmia in the subject.

20 25 17. The method of claim 16, wherein the atrial tachyarrhythmia is an atrial fibrillation or a supraventricular tachyarrhythmia.

25 18. The method of claim 16, wherein the agent is JTV-519.

19. A method for inhibiting the onset of atrial tachyarrhythmia in a subject comprising administering to the subject a prophylactically effective amount of an agent which mimics binding of a FKBP12.6 binding protein to a type 2 ryanodine receptor (RyR2) of the subject's heart, thereby inhibiting the onset of atrial tachyarrhythmia in the subject.

20. The method of claim 19, wherein the atrial tachyarrhythmia is an atrial fibrillation or a supraventricular tachyarrhythmia.

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21. An article of manufacture comprising (i) a packaging material having therein an agent which inhibits protein kinase A (PKA) phosphorylation of a type 2 ryanodine receptor (RyR2) and (ii) a label indicating a use for the agent in inhibiting the onset of atrial tachyarrhythmia in a subject.

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22. An article of manufacture comprising (i) a packaging material having therein an agent which inhibits dissociation of a FKBP12.6 binding protein from a type 2 ryanodine receptor (RyR2) and (ii) a label indicating a use for the agent in inhibiting the onset of atrial tachyarrhythmia in a subject.

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23. The article of manufacture of claim 22, wherein the agent is JTV-519.

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24. An article of manufacture comprising (i) a packaging material having therein an agent which mimics binding of a FKBP12.6 binding protein to a type 2 ryanodine receptor (RyR2) and (ii) a label indicating a use for the agent in inhibiting the onset of atrial tachyarrhythmia in a subject.

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25. A method for treating a subject afflicted with exercise-induced or stress-induced cardiac arrhythmia comprising administering to the subject a therapeutically effective amount of an agent which inhibits protein kinase A (PKA) phosphorylation of a

type 2 ryanodine receptor (RyR2) in the subject's heart, thereby treating the subject.

26. The method of claim 25, wherein PKA phosphorylation of
5 the RyR2 receptor causes dissociation of a FKBP12.6 binding protein from the RyR2 receptor.
27. The method of claim 25, wherein the cardiac arrhythmia
10 is a ventricular fibrillation or a ventricular tachycardia.
28. The method of claim 27, wherein the subject is afflicted with catecholaminergic polymorphic ventricular tachycardia (CPVT).
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29. A method for treating a subject afflicted with exercise-induced or stress-induced cardiac arrhythmia comprising administering to the subject a therapeutically effective amount of an agent which inhibits dissociation of a FKBP12.6 binding protein from a type 2 ryanodine (RyR2) receptor in the subject's heart, thereby treating the subject.
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30. The method of claim 29, wherein the cardiac arrhythmia is a ventricular fibrillation or a ventricular tachycardia.
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31. The method of claim 30, wherein the subject is afflicted with catecholaminergic polymorphic ventricular tachycardia (CPVT).
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32. The method of claim 29, wherein the agent is JTV-519.

33. A method for treating a subject afflicted with exercise-induced or stress-induced cardiac arrhythmia comprising administering to the subject a therapeutically effective amount of an agent which 5 mimics binding of a FKBP12.6 binding protein to a type 2 ryanodine receptor (RyR2) of the subject's heart, thereby treating the subject.
34. The method of claim 33, wherein the cardiac arrhythmia 10 is a ventricular fibrillation or a ventricular tachycardia.
35. The method of claim 34, wherein the subject is afflicted with catecholaminergic polymorphic ventricular tachycardia (CPVT). 15
36. An article of manufacture comprising (i) a packaging material having therein an agent which inhibits protein kinase A (PKA) phosphorylation of a type 2 ryanodine receptor (RyR2) and (ii) a label indicating a use for 20 the agent in treating a subject afflicted with exercise-induced or stress-induced cardiac arrhythmia.
37. An article of manufacture comprising (i) a packaging material having therein an agent which inhibits dissociation of a FKBP12.6 binding protein from a type 2 ryanodine receptor (RyR2) and (ii) a label indicating a use for the agent in treating a subject afflicted with exercise-induced or stress-induced cardiac 25 arrhythmia. 30
38. The article of manufacture of claim 37, wherein the agent is JTV-519.

39. An article of manufacture comprising (i) a packaging material having therein an agent which mimics binding of a FKBP12.6 binding protein to a type 2 ryanodine receptor (RyR2) and (ii) a label indicating a use for the agent in treating a subject afflicted with exercise-induced or stress-induced cardiac arrhythmia.

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40. A method for inhibiting the onset of exercise-induced or stress-induced cardiac arrhythmia in a subject comprising administering to the subject a prophylactically effective amount of an agent which inhibits protein kinase A (PKA) phosphorylation of a type 2 ryanodine receptor (RyR2) in the subject's heart, thereby inhibiting the onset of exercise-induced or stress-induced cardiac arrhythmia in the subject.

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41. The method of claim 40, wherein PKA phosphorylation of the RyR2 receptor causes dissociation of a FKBP12.6 binding protein from the RyR2 receptor.

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42. The method of claim 40, wherein the cardiac arrhythmia is a ventricular fibrillation or a ventricular tachycardia.

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43. The method of claim 42, wherein the subject is afflicted with catecholaminergic polymorphic ventricular tachycardia (CPVT).

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44. A method for inhibiting the onset of exercise-induced or stress-induced cardiac arrhythmia comprising administering to the subject a prophylactically effective amount of an agent which inhibits dissociation of a FKBP12.6 binding protein from a type 2 ryanodine (RyR2) receptor in the subject's heart,

thereby inhibiting the onset of exercise-induced or stress-induced cardiac arrhythmia in the subject.

45. The method of claim 44, wherein the cardiac arrhythmia
5 is a ventricular fibrillation or a ventricular tachycardia.
46. The method of claim 45, wherein the subject is
10 afflicted with catecholaminergic polymorphic ventricular tachycardia (CPVT).
47. The method of claim 44, wherein the agent is JTV-519.
48. A method for inhibiting the onset of exercise-induced
15 or stress-induced cardiac arrhythmia comprising administering to the subject a prophylactically effective amount of an agent which mimics binding of a FKBP12.6 binding protein to a type 2 ryanodine receptor (RyR2) of the subject's heart, thereby inhibiting the
20 onset of exercise-induced or stress-induced cardiac arrhythmia in the subject.
49. The method of claim 48, wherein the cardiac arrhythmia
25 is a ventricular fibrillation or a ventricular tachycardia.
50. The method of claim 49, wherein the subject is
afflicted with catecholaminergic polymorphic ventricular tachycardia (CPVT).
- 30 51. An article of manufacture comprising (i) a packaging material having therein an agent which inhibits protein kinase A (PKA) phosphorylation of a type 2 ryanodine receptor (RyR2) and (ii) a label indicating a use for

the agent in inhibiting the onset of exercise-induced or stress-induced cardiac arrhythmia in a subject.

52. An article of manufacture comprising (i) a packaging
5 material having therein an agent which inhibits dissociation of a FKBP12.6 binding protein from a type 2 ryanodine receptor (RyR2) and (ii) a label indicating a use for the agent in inhibiting the onset of exercise-induced or stress-induced cardiac arrhythmia
10 in a subject.

53. The article of manufacture of claim 52, wherein the agent is JTV-519.

15 54. An article of manufacture comprising (i) a packaging material having therein an agent which mimics binding of a FKBP12.6 binding protein to a type 2 ryanodine receptor (RyR2) and (ii) a label indicating a use for the agent in inhibiting the onset of exercise-induced
20 or stress-induced cardiac arrhythmia in a subject.